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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,696	04/14/2004	Michael Louis Frank	10031537-1	6794
57299	7590	03/31/2006	EXAMINER	
AVAGO TECHNOLOGIES, LTD.			PERT, EVAN T	
P.O. BOX 1920			ART UNIT	
DENVER, CO 80201-1920			PAPER NUMBER	
			2826	

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,696

Applicant(s)

FRANK, MICHAEL LOUIS

Examiner

Evan Pert

Art Unit

2826

Am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a):

The drawings must show every feature of the invention specified in the claims.

Therefore, the “conductor” [i.e. one conductor] *above* “the coupler” [i.e. two conductors] must be shown or the feature canceled from the claims.

A “conductor above the coupler” is grammatically a *third conductor* since applicant defines “a coupler” as “any two conductors” per [0003]. Since “a conductor” is “above” a “coupler” as claimed, the conductor is grammatically “above two conductors.”

Furthermore, the “above” in the Figures is an “above” in an electrical schematic, not an “above” in a meaningful *structural drawing*. As is known to the ordinary of skill in the art, an electrical schematic does not convey “above” and “below” as related to real world structure. That is, electrical *schematics* show representative circuit topography and interconnection, *not relative positioning of structure*.

Applicant’s drawings fail to show “a conductor above a coupler” which grammatically requires three conductors to be meaningful (i.e. one conductor “above” the coupler wherein the coupler is “any two conductors” per [0003]).

Claim Objections

2. Claims 1, 2 and 4 are objected to because of the following informalities: "semi-conductor" in claim 1 does not literally match "semi-conducting" in claims 2 and 4 even though these terms are considered as being equivalent in this case. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "conductor above" recited in claim 1 is ambiguously defined since "the coupler" is "two conductors" per [0003], wherein a "conductor above a coupler," then, must include 3 conductors for the claims to be grammatically proper.

Furthermore, the meaning of "above" is ambiguous as to structure since the "above" is based on an electrical *schematic* rather than a structural drawing.

For purposes of examination, "a conductor above a coupler" that is "integrated into a GaAs substrate" could be a configuration of a conductor that is part of a coupler that is adjacent to a GaAs substrate, or any other integrated arrangement of a coupler in a GaAs substrate that forms a "monolithic GaAs integrated circuit."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as obvious over Kumar et al. (1983 IEEE Article) in view of applicant's admitted prior art.

Regarding claims 1 and 4, the Kumar et al. reference discloses a circuit (III. Coupler Fabrication) comprising a GaAs semi-conductor substrate; and a coupler; wherein the coupler is integrated into the GaAs substrate (i.e. "integrated with other active elements and passive components to form a monolithic GaAs integrated circuit.").

The Kumar et al. reference is silent about "detector," but applicant's admitted prior art explains that a "detector" is necessary to detect power [0005].

The Kumar et al. reference is also silent about "a conductor above a coupler," yet this limitation is broadly interpreted as being ambiguously based on an electrical schematic wherein any coupler portion is "above" another coupler portion, relatively speaking.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to utilize a "detector" as an "active element" integrated in GaAs with a coupler, motivated to detect power with a coupler as is explained by applicant's admitted prior art [0005].

Regarding claim 2, the Kumar et al. reference is silent about "power amplifier, interposing the coupler and detector, integrated into the semiconducting substrate."

Applicant's admitted prior art explains that a prior art method "requires a coupler, detect and a signal processing," [0002] and that further an "amplifier" [0006] couples the coupler to detector by interposing between them.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to adopt a detector and amplifier with the coupler in the Kumar et al. reference, with "detector" and "amplifier" being chosen as the "active elements" to be "integrated with a coupler" to "form a monolithic GaAs integrated circuit" [III. Coupler Fabrication], motivated to make a more efficient and compact MMIC integrated in GaAs as suggested at the second sentence of "III. Coupler Fabrication."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,313,175 is cited as an example of structural drawings of a coupler, as compared to schematic drawings that form applicant's figures.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2826

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 571-272-1969. The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


EVAN PERT
PRIMARY EXAMINER

ETP
March 20, 2006